UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,300	10/26/2001	Matthew D. Crane	111385.141	3124

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WILMER CUTLER PICKERING HALE AND DORR LLP
60 STATE STREET
BOSTON, MA 02109

EXAMINER
RIVERO, MINERVA

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/014,300	CRANE ET AL.
	Examiner	Art Unit
	Minerva Rivero	2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-22* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on <u>26 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>10/26/2001</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2.   The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3.   Claims 1-2, 5-10-12 and 15-17 and 20 are rejected under 35 U.S.C. 102(e) as

being anticipated by Claassen (US Patent 6,647,363).

4.   Regarding claims 1, 11 and 16 Claassen discloses a system, computer-readable

medium and method comprising

an output device configured to play a speech prompt to a user of the system, the

speech prompt conveying information to the user or prompting the user for speech input

(Col. 7, Lines 54-55; Col. 7, Lines 62-65);

a detector configured to receive a sound signal indicative of a possible target

sound and to output a signal representative of the sound signal and a signal indicating

receipt of the sound signal, so as to permit interruption of further output of the prompt if

the detector receives the sound signal while the output device is playing the prompt

(*barge-in detection method*, Col. 10, Lines 24-31);

a recognizer coupled to the detector, the recognizer being configured to receive

the signal representative of the sound signal and to output a recognizer signal indicative

of whether the sound signal is a target sound (*recognizing a barge-in*, Col. 4, Lines 50-

55; Col. 6, Lines 25-29; Col. 10, Lines 27-31) and

a control unit coupled to the output device, the detector, and the recognizer, the

control unit being configured to receive the recognizer signal and, if the detector

received the sound signal while the output device was playing a prompt and the

recognizer signal indicates that the sound signal is other than a target sound, to cause

the output device to play at least a portion of the prompt being played by the output

device when the sound signal was received by the detector (*dialog manager*, Col. 11,

Lines 27-33; *presentation may continue or restart*, Col. 12, Lines 27-31; *re-select*

presentation scenario, Col. 10, Lines 41-49).

5.   Regarding claims 2,12 and 17, Claassen discloses

the control unit is configured to cause the output device to replay the prompt that

was being played when the sound was received by the detector from a beginning of the

prompt (*information may be repeated*, Col. 5, Lines 1-10).

6.   Regarding claims 5 and 20, Claassen discloses

the control unit is configured to cause the output device to play the prompt that

was being played when the sound was received by the detector beginning from a point

at which further output of the prompt was interrupted (*presentation may continue or*

restart at the end of barge-in, Col. 12, Lines 26-31; Fig. 2, elements 260 and 270).

7.   Regarding claim 6, Claassen discloses

the control unit is configured to cause the output device to play the prompt that

was being played when the sound was received by the detector using a restart

algorithm dependent on a point at which further output of the prompt was interrupted

(*intention may be derived from the moment of barge-in and a corresponding scenario is*

chosen, Col. 4, Lines 51-55).

8.   Regarding claim 7, Claassen discloses

the control unit is configured to cause the output device to play the prompt that

was being played when the sound was received by the detector using a restart

algorithm dependent on the prompt (Col. 5, Lines 1-2).

9.   Regarding claims 8, Claassen discloses

a content analyzer configured to process the signal representative of the sound

signal if the signal is determined to be a target sound indicative of speech (inherent in

appropriate presentation scenario is chosen based upon user's recognized barge-in

utterance, Col. 10, Lines 32-44).

10.   Regarding claim 9, Claassen discloses

the content analyzer is configured to attempt to recognize the speech to which

the target sound is indicative (*appropriate presentation scenario is chosen based upon*

user's recognized barge-in utterance, Col. 10, Lines 32-44).

11.   Regarding claim 10, Claassen discloses

the control unit is configured to cause the output device to interrupt playing the

prompt if the detector receives the sound while the output device is playing the prompt

(*presentation may continue or restart at the end of barge-in*, Col. 12, Lines 26-31; Fig. 2,

elements 260 and 270).

12.   Regarding claim 15, Claassen discloses

the instructions for causing a computer to cause the speech recognition

application to play at least a portion of the prompt include instructions for causing the

computer to cause the speech recognition application to play the prompt that was being

played when the signal indicative of a sound was received by the application beginning

from the interruption point (*presentation may continue at the end of barge-in*, Col. 12,

Lines 26-31, Fig. 2, element 260

13.   Claims 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Setlur *et*

al. (US Patent 5,956,675).

14.   Regarding claims 21, Setlur *et al.* disclose

an output device configured to play speech prompts to a user of the system, the

speech prompts conveying information to the user or prompting the user for speech

input (*system-played aural prompt*, Col. 2, Lines 29-32);

a detector configured to receive a signal indicative of a possible target sound and

to output a signal representative of the sound (*barge-in detection*, Col. 5, Lines 13-17;

Fig. 3, elements 320-322);

a control unit, coupled to the output device and the detector, programmed to stop

the output device from playing the prompt if the detector receives the signal indicative of

a possible target while the output device is playing the prompt, and to cause the output

device to resume playing the prompt if the sound is determined to be a non-target

sound (*prompt will not stop for an unrelated sound*, Col. 5, Lines 17-21).

15.   Regarding claim 22, Setlur *et al.* further disclose

        a recognizer coupled to the detector and the control unit, the recognizer being

configured to determine whether the sound received by the detector is a target sound

(*prompt-related barge-in*, Col. 5, Lines 13-23; Fig. 3, element 322).

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

17.   Claims 3-4, 13-14 and 18-19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Claassen (US Patent 6,647,363) in view of Yuschik (US Patent

6,526,382).

18.   Regarding claims 3-4, 13-14 and 18-19, Claassen disclose the control unit is

configured to cause the output device to replay the prompt that was being played when

the sound was received by the detector (*continue or restart*, Col. 26, Lines 26-29;

depending on the situation it may not be necessary to repeat any information, Col. 10,

Lines 44-49).

Claassen does not explicitly disclose

to replay the prompt from a phrase boundary preceding a point at which further

output of the prompt was interrupted and

the phrase boundary is a last phrase boundary preceding the point at which

further output of the prompt was interrupted.

However, Yuschik suggests replaying the prompt from a phrase boundary

preceding a point at which further output of the prompt was interrupted and the phrase

boundary is a last phrase boundary preceding the point at which further output of the

prompt was interrupted (*prompting chunks*, Col. 8, Lines 1-3; see Fig. 8 and Col. 20,

Lines 1-15; *conversational syntax*, Col. 13, Lines 60-66; *information chunks*, Col. 14,

Lines 21-32). Yuschik discloses an *Adaptive Prompting Method* (see Fig. 8) in which a

prompt is divided into *prompting chunks* and if no response is detected after reciting a

prompt (element 830) to a certain point, a *prompting chunk* (820) is repeated. The

repeated *prompting chunk* (820) does not include the *menu introduction chunk* (810);

thus avoiding the repetition of information that is unnecessary at the current state.

Therefore it would have been obvious to one ordinarily skilled in the art at the

time of the invention to supplement the teachings of Claassen with replaying the prompt

from a phrase boundary preceding a point at which further output of the prompt was

interrupted, and the phrase boundary is a last phrase boundary preceding the point at

which further output of the prompt was interrupted as suggested by Yuschik, since

acknowledging phrase boundaries when synthesizing speech results in a clear, concise

dialogue, as taught by Yuschik (Col. 14, Line 64 – Col. 15, Line 3).

Conclusion

19.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Forest *et al.* (US Patent 6,098,043) disclose a barge-in enabled speech

recognition system where interruption delays are minimized.

Silverman (US Patent 5,652,828) explains how intelligibility and user

comprehension is increased when phrase boundaries are introduced in synthesized

speech.

Mitchell *et al.* (US Patent 6,574,595) disclose a recognition-based barge-in

method and system.

Walker (US Patent 6,279,017) discloses a method and system of considering text

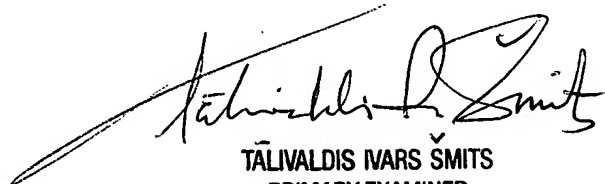attributes when presented so as to enhance user comprehension.

20.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minerva Rivero whose telephone number is (703) 605-4377. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Ivars Smits can be reached on (703) 305-9508. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MR 12/3/2004

TALIVALDIS IVARS SMITS
PRIMARY EXAMINER